



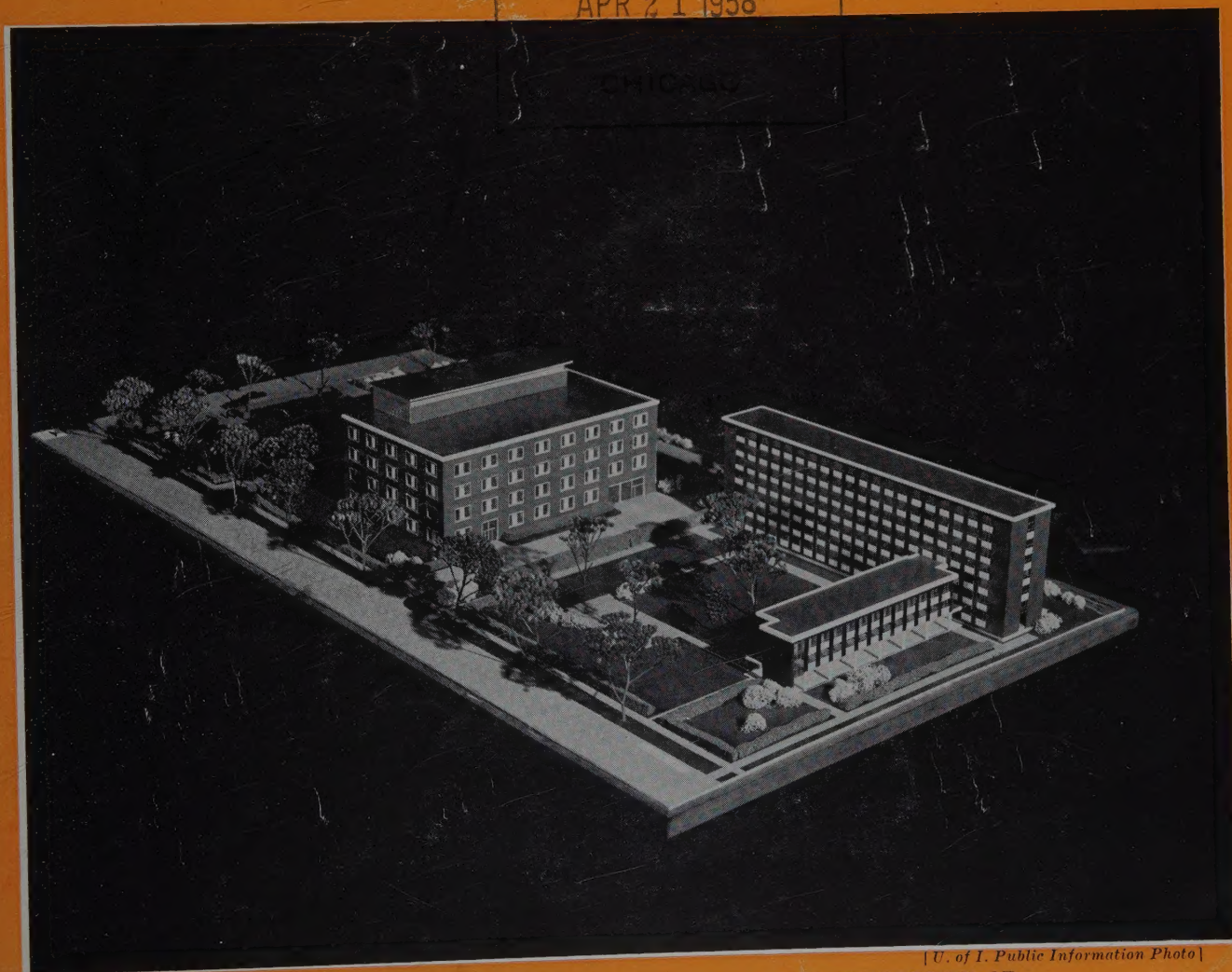
# *the* **ILLINOIS ENGINEER**



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NEW PHYSICS BUILDING TO BE BUILT AT THE UNIVERSITY OF  
ILLINOIS WITH A NEW GRADUATE DORMITORY. (SEE PAGE 2)

THE ILLINOIS ENGINEER,  
APRIL 1958,  
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# Of Interest to I. S. P. E.

## PRESIDENT'S MESSAGE

By A. W. NEUREUTHER

### "Precepts of a Profession"

We are now beginning the 74th year of I.S.P.E. We have just completed an especially prosperous and successful year of the Society. Now the 74th year is a new year of opportunity in many ways.

It is time to re-examine the precepts of the profession of engineering as practiced in Illinois, and the relation of I.S.P.E. to the profession.

We find the doctrines of our profession outlined in the Engineer's Creed and the Canons of Ethics. But a clear, concise definition of a profession, especially engineering, is difficult to find.

There are six necessary attributes of a profession according to

L. Freeman, Secretary of the New York State Board of Examiners of Professional Engineers and Land Surveyors. These are:

1. Technical knowledge and skill.
2. A required educational process.
3. A standard of qualification.
4. A standard of conduct.
5. Formal recognition of status.
6. A professional organization concerned with common advancement and social study.

Does the profession of engineering as practiced in Illinois have all these? Let us examine them one by one to see where we stand.

Technical knowledge and skill seem fairly adequate. Most engineering problems presented to engineers in Illinois can be, and are, solved expeditiously and economically. As research and development provide new knowledge to be applied, engineers are acquiring this knowledge and the requisite skill in applying it. Yet how many professional engineers in Illinois are qualified by training and experience to design, build and place in operation a nuclear reactor? How many of us could design, build and launch an earth satellite into proper orbit?

Perhaps there is now too little public demand for these particular specialized skills and abilities. After all, twenty-five years ago automotive engineers were not in great demand. Fifty years ago aeronautical engineers were not in great demand. And thirty years ago nuclear engineers were not in great demand.

(Continued page 2)

## VOX SECRETARII

By P. E. ROBERTS, Executive Secretary

### Membership

A year ago it was reported to you that the "magical plateau of 2,000 members is still a myth." It is pleasant to report that during February the total number of members passed the 2,000 mark and as this issue is going to press, the total is 2,075. With the 61 delinquents who, unless they pay before July 1, are deducted, the total of 2,000 will still be intact. Several Chapters are about to embark upon vigorous membership campaigns; therefore, the next goal should be at least 3,000 members. In this connection it is also pleasing to note that the number of National members is over 1,400 and as soon as the total exceeds 1,500, the National Society will pay the expenses of the two directors instead of one, as it is now.

### In Retrospect

This column and its heading, "Vox Secretarii," which, as you know, is Latin for "the voice of the secretary," was begun by your Executive Secretary nine years ago. During the nine years that this column has been written, it has served many purposes. It is sometimes dangerous to prophesy, however, shadows of coming events indicate that there will probably be an interruption that very well could be the termination of this column by its proprietor, your Executive Secretary. In any event, the following quotation seems to be apropos to conditions as they now appear on the horizon. The lines are from "The Fates" by Roselle Mercier Montgomery:

The fates are not quite obdurate;

They have a grim, sardonic way

Of granting men who suplicate

The things they wanted—yesterday.

Or as George Burns says, "sayonara-ya all."

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### READ THE ADVERTISEMENTS

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## PRESIDENT'S MESSAGE (Con't)

If we remain progressive we can assume that when the public need is persistent enough those skilled in the required applied sciences will be available to supply the demand for services.

Our profession has a required educational process wherein one learns to design in a four year study of an accredited engineering curriculum; and supplements the BS degree with four years of relevant engineering study, training and experience. Coupled with this we have complementary standards of education and qualification for engineers established by E.C.P.D., A.S.E.E., the Founder Societies, other similar organizations, and our registration law.

Our standards of conduct are epitomized in the Engineer's Creed and the Canons of Ethics for Engineers. There are also the laws of common decency of conduct as we live in society with other human beings.

We do have formal recognition of status. "Registration, which is legal recognition, is formal recognition," is stated by Freeman.

Last, but not least, we have a professional organization concerned with common advancement and social study. Here is where I.S.P.E. and N.S.P.E. exert their influence. We in I.S.P.E. carry this responsibility in Illinois. That's why progress should be made this year in all the previously recognized and established areas of I.S.P.E. activity. New developments will promote expansion.

We not only have the opportunity to do something. We have the responsibility of keeping the engineering profession in Illinois on a high plane. We must have great accomplishment in the 74th year of the Society, and we must so conduct ourselves as to preserve our good reputation in all areas of activity.

We must be careful of our conduct and, while emphasizing all phases of professional matters, we must not over-emphasize certain well intended activities in politics, or legislation, or any other single worthwhile activity of the Society, to its detriment. We must keep perspective, balance, and a true sense of values.

Whatever we do, let's make the 74th year another banner year for I.S.P.E.

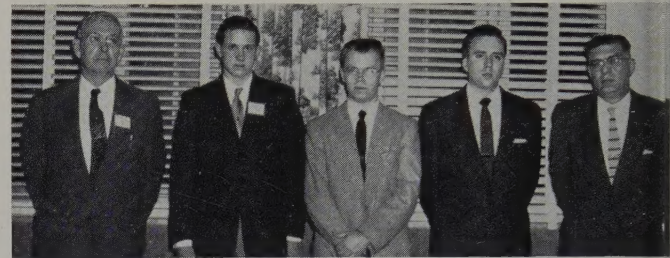
## COVER PICTURE

The first section of the new Physics Building planned for the University of Illinois is shown at left in the architect's model, and a dormitory to house 300 single graduate students at right. Both are for completion by August, 1959, with the Physics Building financed by state appropriation and the residence hall a self-liquidating project. A second section of the physics building, of equal size, is planned to go to the left beyond the unit shown here and to be finished in 1961. Estimated cost of the first unit and equipment is \$5,425,000.

Horse sense is what keeps horses from placing bets on people.

## JOLIET CHAPTER

On February 26 Joliet Chapter entertained the members of the Joliet Junior College Engineers Club at a regular meeting. The accompanying photograph is of President Howard Hassert; Mr. D. W. Castle, teacher of engineering at Joliet Junior College; Richard Miller, Joliet Catholic High School; Bruce Stangeland, Joliet Township High School, and Albert Longnecker, Joliet Junior College. These young men were awarded respectively a certificate of merit as outstanding math and science student at Joliet Catholic High School, certificate of merit as outstanding math and science student at Joliet Township High School, and certificate of merit as outstanding engineering student at Joliet Junior College.



Colonel Corey, District Engineer for U. S. Army Corps of Engineers, spoke on the Cal-Sag Navigation Project. The system, which has been used since 1930, has a channel width from 60 feet in the DesPlaines River to 160 feet above Lockport. The project calls for widening of the channel to a nominal 225 feet. There will be other improvements in the Calumet River, DuPage River and other places. The federal cost of the project is \$79 million and the total cost is \$101 million.

Joliet Chapter is to be commended on not only its interest, but its active participation in looking after the welfare of the embryo engineers in the Joliet area.

## Utilization of Scientists and Engineers Conference

A conference on the efficient utilization of engineers and scientists will be held in Peoria, Illinois, May 6 and 7, at the Hotel Pere Marquette. It will be sponsored by the Bradley University College of Engineering and the Illinois Society of Professional Engineers in cooperation with the President's Committee on Scientists and Engineers.

Dr. H. P. Rodes, President of Bradley University, and Dr. H. V. Hawkins of the Illinois Society of Professional Engineers will be co-chairmen of the conference.

The conference is directed to assist in increasing the productivity of engineering and scientific personnel through more effective utilization of their talents. It is one of about 40 such conferences being held in various educational institutions and industrial centers throughout the United States.

The tongue, being in a wet place, is likely to slip when going fast.



# JOHNNY SAYS: "TEACH US 3 R's IN HIGH SCHOOL"

By HELEN S. FARLOW

University of Illinois, Division of Extension

Why can't "Johnny" read—or spell, or write a simple sentence—even when he gets through 12 years of public school and goes away to college?

The University of Illinois, in a pioneering series of conferences, is trying to find out why, and is attempting to do something to improve the communication skills of Illinois high school and college students.

It is doing this, not in an attempt to dictate policies or curricula details to Illinois high schools, but as a cooperative attempt to solve mutual problems of coordination of teaching methods and materials.

The conferences around which the program of mutual improvement centers are called the School-University Relations Conferences.

They are planned by a joint committee of University administrators and of the Illinois Secondary School Principals Association, and presented by the University of Illinois Division of University Extension. Purpose of the meetings is to seek out ways to help young people bridge the gap between high school and University work.

Prof. Lowell B. Fisher, who is coordinator of the program, says it is an attempt to "coordinate high school and University work in certain subject matter areas.

"We have picked out for emphasis the four subjects most significant for success in University and the occupations which require University training. These four subjects are English, mathematics, history, and science.

"We started with English first, because without a means of communication, anything else is futile. A good mastery of English is basic to our everyday living and to our success in our careers."

The other subject matter areas will be studied in future conferences, according to present plans.

The first School-University Relations Conference to center on English preparation was held last fall. The second was held in March.

In the two conferences, English teachers, principals, and counselors from 130 Illinois high schools—selected on the basis of size and geographical location to provide cross-sections of the schools of the state—sat down with University administrators and with members of the rhetoric (English composition) faculty to seek out ways of providing better English preparation for future University students.

They consulted with a total of approximately 4,000 of their former high school pupils—young men and women who now are students in the University of Illinois—to learn what, if any, additional specific high school preparation would have helped improve their ability to tackle rhetoric.

At the first conference, in which 70 Illinois high schools sent administrators and teachers to the campus for the cooperative conference on English preparation, the English teachers viewed a typical freshman English class

through an observation booth equipped with one-way glass window that enabled the observers to see the class in action, but not be seen by the class members.

As that conference ended, it was announced that the spring Conference on School-University Relations would center around mathematics instruction.

But the other schools of the State—those who had not been included in the original 70 invited to the fall meeting—protested. They wanted their turn at bat on English problems; their chance to confer with the U. of I. spokesmen and their own former pupils. And so the English-centered meeting was repeated by popular request, but with an entirely new cast of Illinois school teachers participating.

For many years, the University of Illinois lent a "crutch" to under-prepared freshmen through "Rhetoric 100," a non-credit remedial course popularly known to students as "Rhet Zero." This course is admittedly a high-school-level class, aimed at helping the poorly prepared students make up work they hadn't had in the public schools. Students unable to carry regular college rhetoric work must pass Rhet Zero before being admitted to regular sections.

But the University has served notice to all schools in Illinois that it will discontinue this make-up course after the Summer Session of 1960. Illinois high schools are anxious to gear their graduates to the more rigid requirements well before that date, and the University is anxious to cooperate in helping them accomplish this.

Prof. Charles Roberts, head of rhetoric faculty at the University of Illinois, calls the two School-University Relations Conferences and the follow-up program which is planned "an academic life-saving expedition. We're trying to save students who otherwise would be certain academic failures. You can't take college level work unless you can read or write."

Why, then, is the University abolishing Rhet Zero in 1960?

"We feel that the University should not teach courses which should be taught in high school, or even seventh grade," Prof. Roberts explains. "We can't assume the responsibility of teaching college students the difference between 'there' and 'their.'"

The University made the announcement of Rhet Zero's forthcoming abolishment in 1955. This is giving the high schools of the state five years to make adjustments which will enable them to meet the higher standards. And Roberts is enthusiastic about the rate at which the high schools are pulling up their own standards of English preparation.

"We feel that the high schools are meeting standards at such a rate that the mortality will not be appreciably lower when we drop the remedial course."



Why does Prof. Roberts think these conferences are so important?

"Even in science and engineering, we have a book-bound system of education," he said. "Yet we get kids in college with fifth-grade level reading and writing skills."

As a consequence of this poor preparation, the University now sends over 20 per cent of its freshman students to Rhet Zero.

At the recent English-centered School-University Relations Conference in March, Prof. Roberts and his staff tried out a new method of approach for the visiting English teachers.

He asked each teacher who was scheduled to visit the campus during the conference to assign an impromptu theme to one senior English class. These were then sent to the campus for grading on a college-level basis by the U. of I. rhetoric faculty. When the high school English teachers arrived on the campus, their pupils' themes were returned to them. Later, each teacher had a conference with the rhetoric instructor who graded his or her papers. This enabled the high school teachers to judge how their present pupils will measure up to required standards when they go to college next year. A comparison of grading standards also proved valuable.

In another session of the conference, hundreds of University students, mostly freshmen, conferred with their former high school teachers on what can be done

to make the transition from high school to college easier. The "brainstorming" sessions were held in a campus ballroom, where long tables were set up to accommodate teachers and former pupils.

What did the teachers think of the aid given them during the conference?

Miss Elsie Sloan, Edwardsville, pointed with pride to the good grades achieved by many of her senior pupils.

"These college grades will help me motivate the students to better work," she predicted.

Philip Coleman, Olympic miler and a member of the U. of I. rhetoric staff, said his interview with Miss Hilda Afinsen of Serena "convinced us both that our grading systems are pretty much the same."

And what did the University freshmen tell the former teachers at the two conferences about ways to improve the college preparation of their successors who are still in high school?

"Make the kids work. Pile it on," one freshman urged.

"Get tough!" advised another.

"What was wrong with me in high school—too much mickey-mousing!" said a third.

"Too much spoon-feeding in high school. That makes it twice as hard for us now," added another.

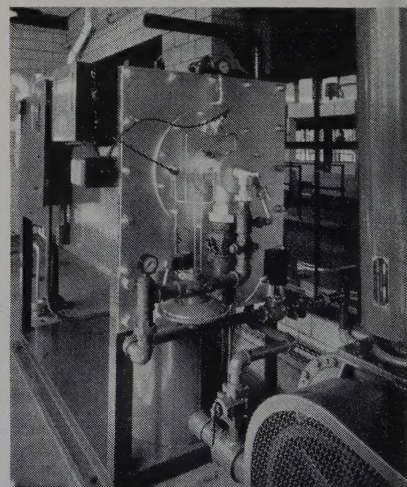
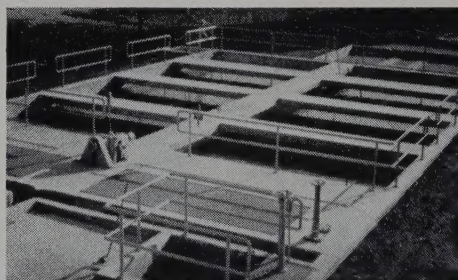
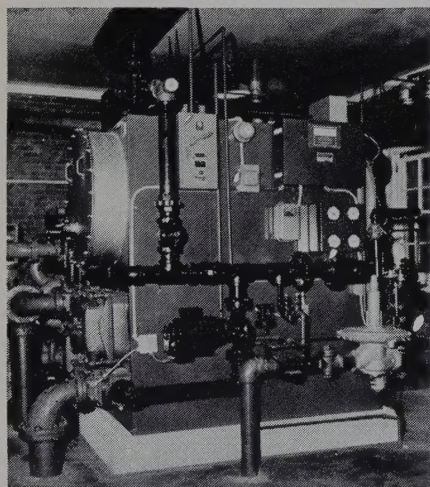
"I don't know anything—and I mean anything!" moaned one 18-year-old who was having difficulty with his University studies.

Now, with two successful English conferences behind

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*Some of the Walker Process installations in Illinois:*

*Left—HEATX, digester sludge heater at Urbana-Champaign; Wilson & Anderson, Consulting Engrs.*

*Top—Rectangular Collectors at Morris; Baxter & Woodman, Consulting Engrs.*

*Right—CARBALL, CO<sub>2</sub> producer at Moline; Greeley & Hanson, Consulting Engrs.*

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them, the University plans to hold similar regional conferences in other parts of the state.

By following up their unique cooperative help program with these conferences in other parts of Illinois, the U. of I. administrators and the high school principals hope, eventually, to reach every English teacher in the state.

From this follow-up program, to be inaugurated next fall with Prof. Roberts spending full-time on school-University coordination of English preparation, a "new look" in Illinois English preparation may be only a few short years away.

The conferences held on the campus, like those which will be held out in the state, had three sponsors—the University of Illinois Office of Admissions and Records, the Illinois Secondary School Principals Association, and the University of Illinois Division of University Extension.

I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.

Sir Francis Bacon

## WHAT IS A BOY?

(Engineer-in-Training)

He is the person who is going to carry on what you have started.

He is to sit right where you are sitting, and when you are gone, attend to those things which you think are important.

You may adopt all the policies you please, but how they will be carried out depends on him.

Even if you make leagues and treaties, he will have to manage them.

He is going to sit at your desk in Congress and occupy your place on the Supreme Court bench.

He will assume control of your cities, states and nations.

He is going to move in and take over your churches, schools, universities and corporations.

All your work for him, and the fate of the nations and humanity is in his hands.

So, it might be well to pay him some attention.

—The Textorian (Greensboro, North Carolina).

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## NEW VIEWS OF PERSONAL HEALTH AND FITNESS

Middle age begins at 26, a University of Illinois professor warned February 27. Prof. Thomas K. Cureton, Jr., internationally known physical fitness expert and a member of the U. of I. College of Physical Education faculty, spoke at a dinner of the 10th annual Illinois Traffic Engineering Conference. The Conference which continued through the 28th is presented by the U. of I. department of civil engineering and Division of University Extension, the Illinois Division of Highways, and professional groups in the field.

Cureton warned that "hot-house apartment life, unvaried by outdoor activities, will surely lead to relatively early physical deterioration." He pointed to armed forces figures which show that "large numbers of young men are entering adult life unmotivated or conditioned to meet stress or strain, or to maintain physical fitness," and said:

"This trend undoubtedly contributes to high accident rates, delinquency, and rapid loss of personal health after 30 years of age."

Studies show that "the curves of various fitnesses and physical abilities begin to decline prematurely after 26 years of age. Middle age may be defined as the point at which these curves turn downward."

To combat deterioration of mind and body, "physical training is needed by all adults of both sexes," and must be followed "over the whole life span, not just during youth, to make a grade in physical education or to make an athletic team."

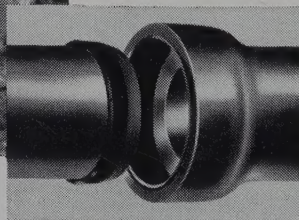
Adult physical education programs are not compensating rapidly enough for "urbanization, mechanization of homes and farms, and the deteriorating influences of indoor living. . . . Every person should have a life-long program of physical training, well-ordered eating, and abstinence from excessive poisons, alcohol, or overeating. The goal should be endurance and organic fitness. This is more largely cultivated than inherited."

In a "positive" program of personal physical education, the adult would "learn to do well such activities as walking, running, skating, skiing, dancing, canoeing, rowing, climbing, and cross-country hiking," Cureton said.

Such a "daily fitness routine" will lead to a "more relaxed temperament, less anxiety, and more satisfaction in living each day. . . . The main goal is 'more life for one's years,' and possibly more longevity, too."

"Your eyes . . . they're beautiful . . . I see dew in them."

"Take it easy, bub," replied the girl, "That ain't dew. That's don't."

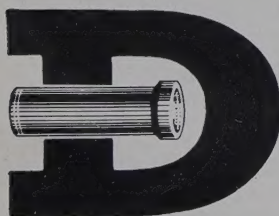


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## LAY PIPE WITH PVC COUPLINGS DISPOSES OF SALT WATER WASTE IN OIL FIELDS

Among the problems plaguing many of the country's oil producers is salt water. Frequently oil lies in underground pools combined with large quantities of salt water. The two liquids of necessity are pumped out together but must be separated at ground level before the oil is of any value.

Ordinarily the mixture is sent to a settling tank where the oil separates from the salt water. The oil rises to the top of the tank while the salt water sinks to the bottom. The oil is then transferred to reservoir tanks and is later pumped to the refinery's storage tanks while the salt water flows directly into evaporation ponds for natural disposal.

This salt water disposal method ran into serious trouble recently in the oil fields of Cal Jones, Canton, Kansas. Ground seepage from the evaporation ponds contaminated underground springs on which the farmers in the area depended for their water supply. Health authorities promptly condemned the salt water disposal method completely.

Willis Krell, a McPherson, Kansas, contractor, was called on by oil producer Jones for a solution to the problem. Krell's plan called for the laying of a disposal pipeline which would transfer the salt water from the settling tank to a reservoir and finally into an eight-inch steel casing pipe which would travel to a depth of 3900 feet below ground level. Here the salt water would be released into what would become an "underground ocean" . . . well below the water springs and oil level . . . permanently eliminated.

In theory the plan was all right. Construction would not be too serious, but the pipeline materials to handle the highly corrosive salt water had to be selected with care if the job was to be a permanent one. In addition, Krell figured there would be a 10 foot head pressure on the pipeline. This demanded permanently tight pipeline joints.

Salt-glazed vitrified clay sewer pipe equipped with polyvinyl chloride compression type couplings were selected for the job. The pipe, a product of the W. S. Dickey Clay Manufacturing Company, Kansas City, Mo., was chosen as the best material available to resist the corrosive influences of the salt water. The Dickey PVC Coupling, also highly resistant to corrosives, provided the joint permanence and speed of installation the job demanded.

Dickey PVC Coupling consists of tough plastic rings, precision molded right on the spigot end and in the bell of the pipe. The polyvinyl chloride is applied to the hot pipe in the Dickey factories in liquid form and is cured at high temperatures. It bonds tightly with the glazed surface of the pipe. Precision molds assure concentricity and exact dimensions.

A joint is completed by applying Dickey Lubricant-Sealer to the mating surfaces of the Dickey PVC Coupling.



Dickey Lubricant-Sealer is applied to the mating surfaces of polyvinyl chloride couplings. The spigot is then inserted into the bell end of the pipe and pushed "home" for a permanent but flexible joint. On the final day of the installation two men laid 1200 feet of pipe in about six hours.

ling, and simply pushing the spigot firmly into the bell socket. As a compression-type joint, the coupling keeps the precision mating surfaces in permanent contact with each other, and exerts a pressure on the inside of the bell and the outside of the spigot. This increases the bond of the coupling with the pipe. Exfiltration, as well as infiltration, is eliminated by the tight but resilient compression seal obtained with the coupling.

The pipeline system, serving three oil wells, totals 3200 feet of the Dickey pipe. The mixture of oil and salt water is pumped from the three wells to three settling tanks. The oil is then pumped off the tops of the settling tanks for eventual refining. Four-inch Dickey clay feeder lines from the bottom of each of the settling tanks channel the heavier salt water to the six-inch clay pipe lateral line. This six-inch pipe takes over to move the salt water through the reservoir to the steel casing.

A trenching machine was used to open the two to four foot deep ditch. Two men strung and laid the three-foot pipe sections in a matter of a few days. On the last day of the installation 1200 feet of pipe was installed in about six hours. The salt water disposal system is the first of its kind in the area to employ clay pipe and the Dickey PVC Coupling.

Girl: "I'm afraid to go into that dark room."

Boy: "But, dearest, I'm with you."

Girl: "That's the trouble."



## IKE'S SCHOLARSHIP PLAN HIT BY ENGINEERING SOCIETY

President Eisenhower's proposal for 10,000 undergraduate scholarships annually for the next four years will create additional burdens for colleges already struggling financially, and will place the wrong emphasis on the engineering-scientific manpower problem, a spokesman for the National Society of Professional Engineers has stated.

Dr. Clark A. Dunn, vice president in charge of educational matters for the 43,000-member Society, and director of the Engineering Experimental Station at Oklahoma State University, said the Administration plan "will complicate and aggravate an already serious situation in the colleges."

Dr. Dunn emphasized that "tuition does not cover the cost of collegiate education," and the difference must be made up from private or public assistance.

"While the reported plan does call for some small aid to graduate schools, it does not provide any aid for the colleges to meet the added costs which will result from the 40,000 students attending under Federal scholarships at the height of the program," he said.

Dr. Dunn pointed out that "studies of the Society over a long period have also indicated that the emphasis in science and engineering should be on quality rather than quantity. Engineering enrollments are at an all-time high and are continuing to increase. The educational institutions are already handicapped severely in giving adequate attention to capable students. A new influx of additional enrollments will strain the faculty and facilities of the institutions beyond the breaking point unless some substantial assistance is provided. The colleges are now in a serious plight with regard to faculty salaries and are losing faculty staff to industry and others through substantially higher salary offers. The Administration plan does not appear to deal with this vital problem."

Dr. Dunn said that some features of the Administration plan are sound and should be supported, such as the provision of additional graduate fellowships, including some supporting funds for the graduate schools. He also praised the plan's increase in the appropriations for the National Science Foundation.

Dr. Dunn explained that those pressing for Federal aid in the engineering and scientific educational field should remember that technological developments such as the earth satellite and guided missiles depend on highly-advanced technology, and that a mere increase in numbers of those with first degrees will not provide the type of highly-advanced technical knowledge which is necessary.

"The emphasis of a Federal program for collegiate education, if one is enacted," he said, "should be confined to graduate work and assistance to the colleges in meeting the crushing burdens of increasing undergraduate enrollments."

## NEW MEMBERS

### National

Bates, Walter A., Sugar Creek Drive, Joliet. (Joliet)  
Baxter, Caesar R., Chatham. (Capital)  
Clack, Grover L., 1000 Nowell Avenue, Joliet. (Joliet)  
Corwin, Harold J., 1449 West Wood, Decatur. (Central Illinois)  
Denison, William E., 212 North Bellevue, Round Lake. (Chicago)  
Eldredge, Richard, 901 Rudy Avenue, Mattoon. (Champaign County)  
French, Neil D., 471 Highview, Elmhurst. (Chicago)  
Fucik, Edward M., 57 South Deere Park Drive, Highland Park. (Chicago)  
Gotaas, Harold B., 618 Colfax, Evanston. (Chicago)  
Hesemann, Gilbert A., 111 Nevada Drive, Decatur. (Central Illinois)  
Hutter, Gohl E., 520 Clark Street, Aurora. (DuKane)  
Job, Henry J., 2822 North Nordica, Chicago 34. (Chicago)  
Johnston, Archie M., 401 East Main, Robinson. (Ambray)  
Knapp, Raymond, 11248 South Oakley Avenue, Chicago. (Chicago)  
Loewe, Robert, 7842 Cregier Avenue, Chicago 49. (Chicago)  
Luke, Harry L., 401 North College Street, Decatur. (Central Illinois)  
Miller, George H., 2819 Girard Avenue, Evanston. (Chicago)  
Schenk, Erwin L., 1101 - 34th Avenue, Moline. (West Central Illinois)  
Sweeney, Matthew J., 903 Lexington Street, Wheaton. (Chicago)  
Toberman, Norman, 306 Oxford Road, Des Plaines. (Chicago)  
Von Till, Louis A., 1606 Talcott Road, Park Ridge. (Chicago)  
Young, George A., 907 East Delaware, Urbana. (Champaign County)

### Affiliate

Carter, Albert L., 1034 West View, Decatur. (Central Illinois)  
Clark, Robert H., 1208 Douglas, Joliet. (Joliet)  
Cooper, Glen R., 2168 Ramsey Drive, Decatur. (Central Illinois)

### E-I-T

Friedrich, John P., 731 Bellevue, Elgin. (DuKane)  
Meusel, Juergen W., 1435 Cherokee Lane, Ottawa. (Illinois Valley)

### Student

Chinnoek, John C., Illiopolis. (Central Illinois)  
Kemper, Harry J., 1059 West Wood Street, Decatur. (Central Illinois)

### Transfer-in-Grade

Andrews, James B. Jr., 1902 Cypress, Champaign. (E-I-T to National) (Champaign County)  
Benson, Harlan L., 620 Crawford Ave., Dixon. (Junior to Affiliate) (Rock River)  
Schwartzkopf, Glen E., 2274 Oaklawn Dr., Decatur. (E-I-T to National) (Central Illinois)

The little man was pushing the cart through crowded market.

"Coming through," he called merrily, but no one moved.

"Gangway!" he shouted. A few men stepped aside. Ruefully he surveyed the situation and then smiled as a bright idea hit him.

"Watch your nylons," he warned.

The women scattered like chaff in the wind.

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## Items of Personal Interest

**Harold G. Mason**, (N '51) a member of Lake County Chapter, has been elected Executive Vice President of the Chicago North Shore and Milwaukee Railway. In his new position, Mr. Mason will be in charge of the affairs of the Railway. A native of Libertyville, he began work with the North Shore seven years before earning a S. in Ry.C.E. at the University of Illinois in 1927. Beginning as a Rodman, Mr. Mason has worked at positions of successively greater responsibility to his present position as Executive Vice President.

**Lawrence M. Madden**, (S '46, N '49), Agona, Guam, P. I. has been appointed Acting Chief Officer of the Public Utility Agency for the Government of Guam in the Marianas Islands. Mr. Madden is a graduate of Chicago Technical College with a B.S. in Construction Engineering in 1942. His work in Guam includes the Electric System, Water System and Telephone System. In Guam utilities between military establishments and civilian communities are all interconnected. Mr. Madden writes that his work is a real challenge in as much as much development of the three systems remains to be completed.

Around the world in forty-eight days was the schedule of **Dean William L. Everitt**, University of Illinois College of Engineering. "Bill" left Champaign-Urbana on February 12th traveling east to New York, London and Paris. Thence to India to observe and gather information and home by way of Japan, Hawaii, California arriving in Urbana on March 31st. Welcome home.

### EMPLOYMENT OPPORTUNITIES

The discussion about whether there is a shortage or surplus of engineers continues without abatement. It is interesting to note that the engineering graduates at the University of Illinois received an average of approximately \$2.00 a month more than those who accepted employment in June, 1957. This would indicate that there is still a brisk demand for graduates without experience.

Also, on the local scene I have been requested to use the following information: "Civil Engineer to handle technical phases of producing concrete for a Ready Mix Dealer and Paving Contractor. P. O. Box 560, Champaign, Illinois."

A letter with a position description of Civil Engineers CE I and CE II is at hand from the City of Chicago. The salary range for CE I is \$5,064 to \$6,144, for CE II, \$5,580 to \$6,768. Qualifying examinations were held at the Chicago City Hall for CE I on April 12 and will be held on April 19 for CE II.

**Mr. C. S. Monnier** (S '39, N '47), Division Engineer, United States Bureau of Public Roads, left information at the Executive Secretary's office on student trainees

in highway engineering. GS IV salary at \$3,415 and GS V at \$4,480. Further information will be gladly supplied to those interested. Please drop a line to either Mr. Monnier at the U. S. Bureau of Public Roads, Springfield, or the Executive Secretary's office.

## LADIES AUXILIARIES

### DuKane Chapter Ladies Auxiliary

The DuKane Ladies Auxiliary has embarked upon its third year under the leadership of the following officers: Mrs. Leland Miller, President; Mrs. John J. Fast, Vice President; Mrs. Ralph Gordon, Secretary; Mrs. John Friedrich, Treasurer; Mrs. George Booth Jr., Mrs. Rob Roy, and Mrs. Richard Thornton, Directors.



DuKane Ladies Auxiliary Officers. Left to right, seated, Mrs. John Fast, vice president and Mrs. Leland Miller, president; standing, Mrs. George Booth Jr., director; Mrs. Ralph Gordon, secretary; Mrs. John Friedrich, treasurer; Mrs. Richard Thornton, director; and Mrs. Rob Roy, director.

In the beginning only four meetings a year were held, but because of the increased interest of the members, nine meetings a year are now being held. Meetings are held on the third Thursday of the month and alternate between Elgin and Aurora. The membership of this active auxiliary has more than doubled since its charter night a little less than two years ago.

### St. Clair Chapter Ladies Auxiliary

The Ladies Auxiliary of the St. Clair Chapter took an active part in the National Engineers' Week celebration. The officers are Mrs. A. J. Feickert, President; Miss Eleanor Arndt, Vice President; Mrs. Loren Krause, Secretary; Mrs. Warren Britten, Treasurer, and Mrs. Joe Goldenberg, Board Member.

"Don't you love driving on a moonlight night like this?"

"Yeah, but I thought I'd wait till we got further out in the country."



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## WE DIG FOR FACTS

If Illinois is to learn about its prehistoric past it must preserve evidences threatened by today's progress, Prof. John C. McGregor, University of Illinois archeologist told the state's highway and traffic men, gathered on the campus for their annual conferences.

Highway building is among the big threats to buried evidence of the past, he said, but cooperation of the Illinois Division of Highways with the Illinois Archeological Survey has set an archeological salvage pattern which has become a model and is being copied in other states.

Prof. McGregor urged that all road organizations—county, township, and local as well as state—cooperate in this salvage, since once archeological evidence is destroyed it is gone forever. He urged similar cooperation in construction of pipelines and factories and by developers and subdividers.

"Illinois archeological resources are not inexhaustible. Their destruction is going on at an alarming rate. Once they are gone, they are gone forever," he said.

He explained that archeologists are interested not just in collecting artifacts—arrowheads, pottery, and the like—but much more in recording very destructible information which may be revealed by the way in which these are located in the soil, in evidence of human activity revealed by changes in soil color, the ashes and charred sticks of long-dead fires, and the like.

The Illinois Archeological Survey is a cooperative organization supported by the University of Illinois, Southern Illinois University, Illinois State Museum, and others. Prof. McGregor is president, and headquarters are at the University of Illinois.

A catalog of more than 2,000 archeological sites and reports in the state has been compiled by Miss Elaine A. Bluhm, secretary. Salvage activities are directed by William J. Beeson, field director, and Miss Bluhm. Both are trained archeologists.

All state highway construction plans are checked by the survey for known archeological sites or areas, and field workers on the jobs promptly divert operations and report for Beeson's inspection any archeological evidences revealed by artifacts, burials, or sudden changes in soil color.

A number of sites have been carefully excavated, photographed and measured, data recorded, and items found preserved for use of future scholars studying the prehistory of the state, Prof. McGregor said.

He spoke at the joint banquet of the 44th annual Illinois Highway Engineering Conference and 10th annual Illinois Traffic Engineering Conference. These are sponsored by the university's civil engineering department, Illinois Division of Highways, and five professional organizations in the highway, road, and local government field, and presented with cooperation of the Division of University Extension.

## THE WAY TO LEAD MEN

When the conduct of man is designed to be influenced, persuasion—kind, unassuming persuasion—should ever be adopted. It is an old and true maxim that "a drop of honey catches more flies than a gallon of gall." So with men. If you would win a man to your cause, first convince him that you are his sincere friend.

Therein is a drop of honey that catches his heart, which, say what he will, is the great high road to his reason, and which when once gained, you will find but little trouble in convincing his judgment of the justice of your cause, if indeed that cause really be a just one.

On the contrary, assume to dictate to his judgment, or to command his action, or to mark him as one to be shunned and despised, and he will retreat within himself, close all the avenues to his head and his heart; and though your cause be naked truth itself, transformed to the heaviest lance, harder than steel, and sharper than steel can be made, and though you throw it with more Herculean force and precision, you shall be no more able to pierce him, than to penetrate the hard shell of a tortoise with a rye straw.

Such is man, and so must he be understood by those who would lead him, even to his own best interest.

—Abraham Lincoln

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## CAREER SATISFACTIONS BOOK

The publication is the latest in a series of executive research reports made under the sponsorship of the Professional Engineers Conference Board for Industry, in co-operation with the National Society of Professional Engineers.

Conducted by the Opinion Research Corporation, Princeton, New Jersey, the survey report is based on data gathered from interviews with several hundred professional engineers employed in industry in all the specialized technical fields. The lengthy "depth" interviews were designed to bring out the non-salary career satisfactions of engineers at three stages of professional experience—3 to 6 years, 10 to 15 years, and 20 to 25 years.

Sixty-seven per cent of the engineers in the 3-to-6-years-experience group stated that there were things lacking in the college training they received, and approximately 76 per cent of those with more experience felt that there were deficiencies in their college training.

The engineers surveyed enthusiastically endorsed a wide range of things management can do to foster professional recognition. The engineers said management should:

- Keep engineers informed
- Ask for their ideas on relevant matters
- Identify their names with their work
- Show how their work fits into the total picture

The survey indicated that the engineers in the company hierarchy view themselves as superior to the accounting, personnel, public relations, and advertising branches. However, appreciable numbers feel that the engineer is accorded less importance than the production and sales departments. Well over half the engineers in all experience-level groups think that engineering is not recognized as a profession by the general public.

The survey found that the engineer "feels deficient in the non-technical skills, and welcomes company training that will extend his competence beyond the purely technical."

Topping the list of company sponsored training courses that the engineers said would be most profitable to them were: organization and planning, how to supervise, and how to handle people.

The survey found that the engineer "doesn't have a very strong bent for engaging in the activities of professional societies; he doesn't see the need for such activity on his part, and doesn't view it as status building." Only 10 per cent of the engineers surveyed said they are "very active" in professional engineering societies; 17 per cent said they are "fairly active"; and the rest said they "do little or nothing in professional societies."

The survey also found that the most skepticism about

the opportunities for advancement in engineering was expressed by men in the lowest technical jobs.

Copies of "Career Satisfactions of Professional Engineers in Industry" may be obtained for \$3 from the Professional Engineers' Conference Board for Industry, 2029 K Street, Northwest, Washington 6, D. C.

---

A modern woman is a creature who can throw together a 20-minute meal that looks as though she'd spent 2 hours on it—and then spends 2 hours getting her hair to look as though she's just thrown it together.

---

Most people can keep a secret; it's the folks they tell it to who can't.

---

A group of Sunday school first-graders was asked to draw a picture of their favorite scene from the Bible. The small son puzzled the teacher with a hot rod version of a car with a bearded man in the front seat and a man and woman in the back.

"Now just what Bible story is this supposed to illustrate?" asked the puzzled teacher.

"That," replied the child, "is a picture of the Lord driving Adam and Eve out of the Garden of Eden."

---

Great people are not affected by each puff of wind that blows ill. Like great ships, they sail serenely on in a calm sea or a great tempest.

Five most important words: "I am proud of you." . . . Four most important words: "What is your opinion?" . . . Three most important words: "If you please." . . . Two most important words: "Thank you." . . . The smallest word: "I."

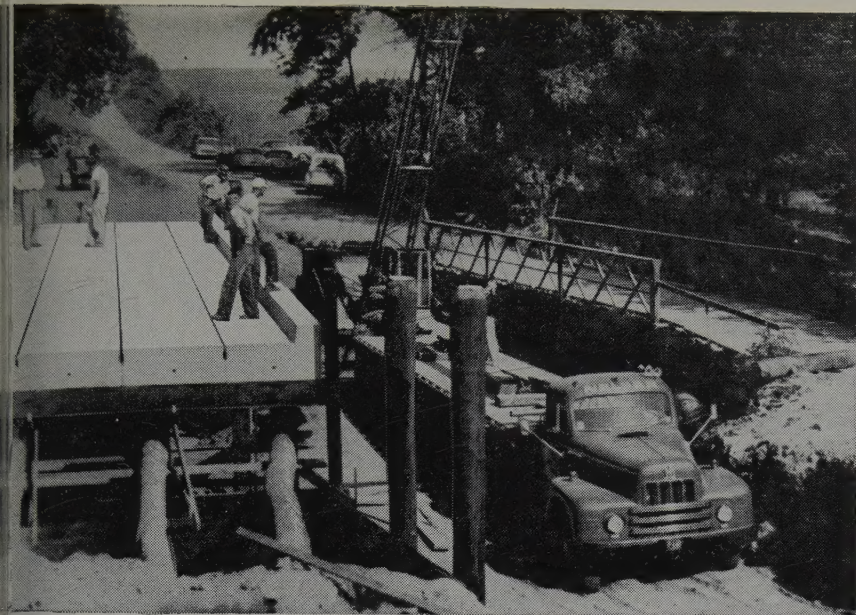
There is far more hunger for love and appreciation in the world than there is hunger for bread.

Strong and bitter words indicate a weak cause.  
—Victor Hugo

"The tragedy of our time is that we have succeeded in splitting the atom before acquiring the wisdom to unite humanity."—Dr. Julius Mark, Senior Rabbi, Temple Emanu-El, New York City.

Apparently only marriage suffers from our idea that it is a failure unless it has a perfect score. We do not expect 100% return on any other investment. Children learn to accept school grades below 100 as satisfactory. A baseball player who hits 333 (which is 33%) is considered a star. The average golf player enjoys his game although mighty few of them ever shoot par. If a business man falls short of becoming a millionaire he is satisfied. But these same people worry deeply over less than perfect bliss in marriage. There is no such thing, and never will be—because there are no perfect men and women. That's life!





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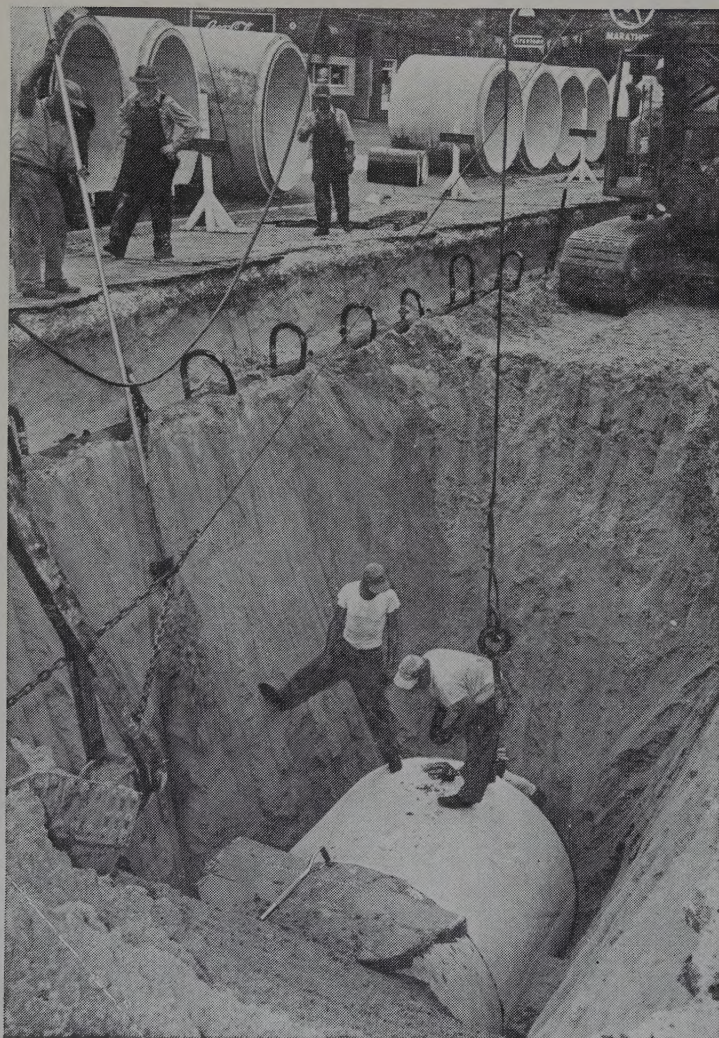
J. L. Kirsch, Plant Manager

# NELSEN CONCRETE CULVERT CO.





Above: South Broadway Interceptor  
Below: Tolleston Area: Chase Interceptor; 25th Street Interceptor  
Engineer: Hurst-Roche, Inc., Hillsboro, Ill.  
Contr.: Witter-Gaddis Constr. Co., Schererville, Ind.  
Rhode Island Interceptor (not shown)  
Engineer: Hurst-Roche, Inc.  
Contractor: Marsch Construction Co., Chicago



## CONCRETE PIPE chosen for Gary, Indiana \$6,000,000 Sewer Project

To meet the needs of its expanding population Gary, Indiana has invested \$6,000,000 in new concrete interceptor and relief sewers.

The first project, a \$2 million job, consisted of (a) an interceptor on Rhode Island Avenue using reinforced concrete sewer pipe ranging from 96" to 132" in size and (b) an interceptor on South Broadway requiring over a mile of concrete pipe ranging from 24" to 84".

The second project, the Tolleston Area: Chase Interceptor; 25th Street Interceptor, was a \$4 million job. The Chase Interceptor required about miles of reinforced concrete sewer pipe from 60" to 132" in diameter. The 25th Street Interceptor required one and one-half miles of concrete pipe ranging from 24" to 84" in size.

The 132" pipe was the largest ever installed in northwest Indiana. Both projects were financed by bond issues.

Countless cities have learned that concrete pipe has rugged durability and great structural strength. It offers maximum hydraulic capacity, minimum infiltration and leakage and exceptional resistance to abrasion.

Concrete pipe sewers are moderate in first cost, require very little maintenance, and give a lifetime of faithful service. The result: *low annual costs*.

**PORTLAND CEMENT ASSOCIATION**  
111 West Washington Street, Chicago 2, Ill.

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work